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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,804	05/19/2006	Francis P. Kuhadja	P71523US/37049 00003	7358
85938	7590	07/24/2009		
Fox Rothschild LLP Phila, Biotech Group 2000 Market Street Philadelphia, PA 19103			EXAMINER RAHMANI, NILOOFAR	
			ART UNIT 1625	PAPER NUMBER
			MAIL DATE 07/24/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/519,804

Applicant(s)

KUHADJA ET AL.

Examiner

NILOOFAR RAHMANI

Art Unit

1625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on remark dated on 06/09/2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16, 18-20, 23-63 and 66-72 is/are pending in the application.
- 4a) Of the above claim(s) 1-14, 18-19, 23-31, 33, 35-67 and 71-72 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15, 16, 20, 32, 34, 69 and 70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Finality of the previous office action is withdrawn due to reconsideration of claims 69-72. Claims 1-16, 18-20, 23-63, 66-72 are currently pending and claims 17, 21-22, 64-65 are cancelled in the instant application.

Claims 15-16, 20, 32, 34, 69-70, drawn to compounds and pharmaceutical composition of formula (V) and (VII) are examined. Claims 1-14, 18-19, 23-31, 33, 35-67 and 71-72 remaining subject matter being drawn to the non-elected invention are withdrawn per 37 CFR 1.142(b).

2. The rejections of claims 15-16, 32 under 103(a) over Asano et al., and Drioli et al., and Zhang et al are maintained for reason of record. Applicants argue that claims 15 and 17 note that the compounds have outstanding pharmacological properties which are outlined in the specification. It is the examiner's position that R^{21} is C_2-C_{20} alkyl, wherein the prior art compounds has $-CH_3$ at the position corresponding to R^{21} . One ordinary skill in the art would be motivated to modify the compounds of Asano et al. to obtain the instant compounds because they are homologues.

3. ***New Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

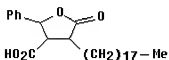
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 15-16, 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Kilminster et al., US 4753871. Kilminster et al. discloses the instant claimed compound, which from the STN search is

RN 118534-40-0

CN 3-Furancarboxylic acid, tetrahydro-4-octadecyl-5-oxo-2-phenyl-

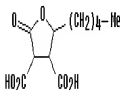


, which anticipates the instant compounds when R22 is ph, R21 is C18 alkyl in the instant application. Therefore, the instant claims are anticipated by Kilminster et al.

4. Claims 15-16, 32, 69-70 are rejected under 35 U.S.C. 102(b) as being anticipated by De Azevedo et al., Journal of Organic Chemistry (1992), 57(17), 4567-9. De Azevedo et al. discloses the instant claimed compound, which from the STN search is

RN 142188-52-1

CN 3,4-Furandicarboxylic acid, tetrahydro-2-oxo-5-pentyl-



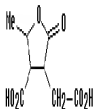
, which anticipates the instant compounds when R22 is alkyl, R21 is COOH in

the instant application. Therefore, the instant claims are anticipated by De Azevedo et al.

5. Claims 15-16, 32, 69-70 are rejected under 35 U.S.C. 102(b) as being anticipated by Kamikawa et al., *Tetrahedron* (1970), 26(19), 4561-87. Kamikawa et al. discloses the instant claimed compound, which from the STN search is

RN 30203-69-1

CN 3-Furanacetic acid, 4-carboxytetrahydro-5-methyl-2-oxo-



, which anticipates the instant compounds when R22 is Me, R21 is COOH in the instant application. Therefore, the instant claims are anticipated by Kamikawa et al.

6. Claims 15-16, 32, 69-70 are rejected under 35 U.S.C. 102(b) as being anticipated by Haerdi et al., *Journal of the Chemical Society, Transactions* (1925), 127, 1237-48. Haerdi et al. discloses the instant claimed compound, which from the STN search is

RN 861321-23-5

CN 3,4-Furandicarboxylic acid, tetrahydro-2-oxo-5-phenyl-



, which anticipates the instant compounds when R22 is Ph, R21 is COOH in the instant application. Therefore, the instant claims are anticipated by Haerdi et al.

7. Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

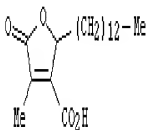
Claims 20 and 34 are rejected under 103(a) as being unpatentable over Cavallito et al., Journal of the American Chemical Society (1948), 70, 3724-6.

Determination of the scope and content of the prior art (MPEP §2141.01)

Cavallito et al. disclosed analogous compounds, which from the STN search is:

RN 493-47-0

CN 3-Furancarboxylic acid, 2,5-dihydro-4-methyl-5-oxo-2-tridecyl-



Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

The difference between the instant claim and the prior art compound is that the instant claim replaces one methylene of the prior art compound with a H.

Finding of prima facie obviousness-rational and motivation (MPEP §2142.2143)

One having ordinary skill in the art would be motivated to modify the compounds of Cavallito et al. to obtain the instant compound.

A compound that differs only in molecular arrangement from the compounds disclosed in the prior art and which for which no unexpected properties of this compound are disclosed in the specification is unpatentable, *Ex parte KRUEGER AND HAYES*, 121 USPQ 420, *In re NORRIS*, 84 USPQ 458, *In re Hass* 60 USPQ 552, which found a *prima facie* case of obviousness of 1-

chloro-1-nitrobutane over 1-chloro-1-nitroisobutane taught in the prior art, *Ex parte Ulliyot*, 103 USPQ 185, which found a *prima facie* case of obviousness of 2-oxo-quinolines over a 1-oxo-isoquinoline taught in the prior art, *In re FINLEY*, 81 USPQ 383, which found a *prima facie* case of obviousness of 2-ethyl hexyl salicylate over octyl salicylate taught in the prior art.

Compounds that differ only by the presence or absence of an extra methylene group or two are homologues. Homologues are of such close structural similarity that the disclosure of a compound renders *prima facie* obvious its homologues. The homologue is expected to be prepared by the same method and to have generally the same properties. This expectation is then deemed the motivation for preparing homologues. Of course, these presumptions are rebuttable by the showing of unexpected effects, but initially, the homologues are obvious even in the absence of a specific teaching to add or remove methylene groups. See *In re Wood*, 199 USPQ 137; *In re Hoke*, 195 USPQ 148, *In re Lohr*, 137 USPQ 548; *In re Magerlein*, 202 USPQ 473; *In re Wiechert*, 152 USPQ 249; *Ex parte Henkel*, 130 USPQ 474; *In re Fauque*, 121 USPQ; *In re Druey*, 138 USPQ 39.

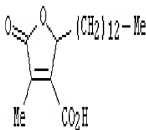
8. Claims 20 and 34 are rejected under 103(a) as being unpatentable over Pohmakotr et al., *Helvetica Chimica Acta* (2002), 85(11), 3792-3813.

Determination of the scope and content of the prior art (MPEP §2141.01)

Pohmakotr et al. disclosed analogous compounds, which from the STN search is:

RN 493-47-0

CN 3-Furancarboxylic acid, 2,5-dihydro-4-methyl-5-oxo-2-tridecyl-



Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

The difference between the instant claim and the prior art compound is that the instant claim replaces one methylene of the prior art compound with a H.

Finding of prima facie obviousness-rational and motivation (MPEP §2142.2143)

One having ordinary skill in the art would be motivated to modify the compounds of Pohmakotr et al. to obtain the instant compound.

A compound that differs only in molecular arrangement from the compounds disclosed in the prior art and which for which no unexpected properties of this compound are disclosed in the specification is unpatentable, *Ex parte KRUEGER AND HAYES*, 121 USPQ 420, *In re NORRIS*, 84 USPQ 458, *In re Hass* 60 USPQ 552, which found a *prima facie* case of obviousness of 1-chloro-1-nitrobutane over 1-chloro-1-nitroisobutane taught in the prior art, *Ex parte Ulliyot*, 103 USPQ 185, which found a *prima facie* case of obviousness of 2-

oxo-quinolines over a 1-oxo-isoquinoline taught in the prior art, *In re FINLEY*, 81 USPQ 383, which found a *prima facie* case of obviousness of 2-ethyl hexyl salicylate over octyl salicylate taught in the prior art.

Compounds that differ only by the presence or absence of an extra methylene group or two are homologues. Homologues are of such close structural similarity that the disclosure of a compound renders *prima facie* obvious its homologues. The homologue is expected to be prepared by the same method and to have generally the same properties. This expectation is then deemed the motivation for preparing homologues. Of course, these presumptions are rebuttable by the showing of unexpected effects, but initially, the homologues are obvious even in the absence of a specific teaching to add or remove methylene groups. See *In re Wood*, 199 USPQ 137; *In re Hoke*, 195 USPQ 148, *In re Lohr*, 137 USPQ 548; *In re Magerlein*, 202 USPQ 473; *In re Wiechert*, 152 USPQ 249; *Ex parte Henkel*, 130 USPQ 474; *In re Fauque*, 121 USPQ; *In re Druey*, 138 USPQ 39.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Niloofar Rahmani whose telephone number is 571-272-4329. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres can be reached on 571-272-0867. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/NILOOFAR RAHMANI/

07/21/2009

/D. Margaret Seaman/

Primary Examiner, Art Unit 1625